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KIMBALL, BRUCE A., DALE L. NOLTE, and DAN L. CAMPBELL. Black bear foraging: Tree Selection and Sapwood Characteristics. USDA/APHIS/ADC/DWRC, Denver, CO 80225 USA. (BAK). USDA/APHIS/ADC/DWRC, Olympia WA 98512 USA. (DLN). USDA/APHIS/ADC/DWRC, Olympia WA 98512 USA. (DLC).

Foraging for sapwood by black bears (*Ursus americanus*) is detrimental to timber production in the Pacific Northwest. Complete girdling of trees is lethal, while partial girdling can retard growth and facilitate insect infestation and disease. This damage results in economic losses and inhibits reforestation efforts. Criteria by which bears select trees is not understood, though this information may enhance future efforts to deter damage. In this study, 3 characteristics of sapwood were evaluated to determine whether they were correlated with tree damage. The characteristics investigated were: 1) carbohydrate content; 2) terpene content; and 3) sapwood quantity. Sapwood samples (10 x 20 cm) were collected from undamaged portions of Douglas-fir (*Pseudotsuga menziesii*) selected for forage and trees rejected for forage. All trees were equally accessible. Samples were weighed and then frozen for subsequent analyses by liquid and gas chromatography for determination of carbohydrates and terpene compounds, respectively.